REMARKS

The Office Action mailed on January 23, 2002, has been received and reviewed. Claims 1-33 are pending in the above-referenced application. Each of claims 1-33 stands rejected.

Claims 4, 6, 28, and 30 have been canceled without prejudice or disclaimer.

Reconsideration of the above-referenced application is respectfully requested.

Rejections Under 35 U.S.C. § 103(a)

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Other factors, including a high level of commercial success, evidence of copying by others, and long-felt but unmet needs, have long been considered to be indicia of nonobviousness.

The Bowling Ball Art in View of Shinbanai

Claims 1-8 and 10-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over what is old and well known in bowling balls (hereinafter "the bowling ball art") in view of U.S. Patent 4,722,815 to Shinbanai (hereinafter "Shinbanai").

It is respectfully submitted that the arguments that are set forth in the outstanding Office Action do not amount to a *prima facie* case of the obviousness of any of claims 1-8 or 10-31, as presented herein.

Shinbanai teaches a method for forming a synthetic resin product that includes incorporating an additive, such as a fragrance, into cyclodextrin. The cyclodextrin-fragrance compound is dried, powdered, and mixed with a resin in such a way as to convert reducing

sugars that are present as impurities in the cyclodextrin into chemically stable glycitols. The product is then dried, powdered, and mixed with resin to form a product which may subsequently be mixed into a larger quantity of compatible resin so that fragrance or another additive may be included in an article of manufacture made with the larger quantity of compatible resin. In each of the Examples provided by Shinbanai, this fragrance-including resin is formed into pellets or ground into a powder. With respect to the types of resins in which the fragrance-imparting compound of Shinbanai may be used, the teachings of Shinbanai are limited to thermoplastic resins and thermoset resins. Shinbanai, col. 7, lines 59-66. This appears to be because thermoplastic and thermoset resins are often subjected to temperatures that may cause fragrance or other additives to decompose or evaporate.

If the resin of the fragrance-imparting compound comprises a thermoplastic material, the fragrance-imparting compound may be heated and, thus, dissolved into thermoplastic resins. If, however, the resin of the fragrance-imparting compound is a thermoset resin, or if the fragrance-imparting compound is used in a thermoset-resin that sets at a temperature that is less than the melting temperature of the fragrance-imparting compound, the a powder or small pellets of the fragrance-imparting compound must be dispersed throughout the resin from which an article of manufacture is to be made.

Shinbanai is silent as to the hardness of the materials into which the fragrance-including compound is incorporated, although none of those disclosed appears to approach the hardness of a bowling ball.

Independent claim 1, as amended and presented herein, recites a bowling ball that includes a mass of two-part resin and a fragrance at least partially *dissolved* in at least a portion of the two-part polyurethane.

By way of contrast with amended independent claim 1, it is respectfully submitted that neither the well known teachings in the art of bowling balls nor Shinbanai teaches or suggests a fragrance that is at least partially dissolved in at least a portion of a two-part resin of a bowling ball. Rather, as has been acknowledged at page 2 of the outstanding Office Action, "the use of a fragrance" is "[l]acking in bowling balls . . ." The teachings of Shinbanai are limited to the use of a fragrance-imparting compound in thermoplastic and thermoset resins. Thus, Shinbanai

includes no teaching or suggestion of a bowling ball or other structure that includes a two-part resin with fragrance at least partially dissolved therein.

Moreover, it is respectfully submitted that one of ordinary skill in the art would not have been motivated to combine the well known teachings in the art of bowling balls with those of Shinbanai in such a way as to render obvious the subject matter recited in amended independent claim 1. In particular, one of ordinary skill in the art would readily recognize that a fragrance-imparting compound of the type described in Shinbanai could not be dissolved in a two-part resin, such as those which are known to be useful in the bowling ball art, since a two-part resin would not likely reach a temperature sufficient to melt the resin of the fragrance-imparting compound of Shinbanai so as to release fragrance therefrom and, thus, permit dissolution thereof.

For the same reason, it is respectfully submitted that one of ordinary skill in the art could not reasonably expect the combination of the well known teachings in the bowling ball art and Shinbanai to result in the bowling ball recited in amended independent claim 1. In particular, assuming, *arguendo,* that one of ordinary skill in the art would have made the asserted combination, one of ordinary skill in the art would not have expected the fragrance of Shinbanai to dissolve in a two-part resin from which a bowling ball is made. Instead, the fragrance would remain contained within the powder or pellets.

Finally, Shinbanai notes that the addition of fragrance and other materials to cyclodextrin and the subject matter described in Shinbanai were developed to facilitate the addition of fragrance to resins which have high melting or setting temperatures (*e.g.,* temperatures of about 180° C. or above). Col. 2, lines 56-68. Since Shinbanai frames the problem in this way, it would appear that there would have been no reason prevent one in the bowling ball art from adding fragrance to bowling balls that are manufactured from two-part polyurethane resins which do not require high manufacturing temperatures. Nonetheless, based on the teachings of the references that are of record in the above-referenced application, it does not appear that, prior to the disclosure provided by the above-referenced application, there was an attempt by anyone of skill in the art to add fragrance to bowling balls or other articles of manufacture that include two-part resins.

For these reasons, it is respectfully submitted that the combination of the well known teachings in the art of bowling balls with the teachings of Shinbanai do not result in a *prima facie* case of the obviousness of amended independent claim 1.

Claims 4 and 6 have been canceled without prejudice or disclaimer, rendering the rejection thereof moot.

Claims 2, 3, 5, 7, and 8 are each allowable, among other reasons, as depending from claim 1, which is allowable.

Independent claim 10, as amended and presented herein, recites a method for manufacturing a bowling ball which includes, among other things, "blending at least one fragrance *directly* into [a] liquified material . . ." (emphasis supplied).

It is respectfully submitted that neither the teachings that were well known in the bowling ball art prior to the filing date of the above-referenced application nor Shinbanai includes any teaching or suggestion of a method for manufacturing a bowling ball that includes blending at least one fragrance directly into a liquified material. Instead, as indicated at page 2 of the outstanding Office Action, prior to the disclosure of the above-referenced application, the bowling ball art did not include the use of fragrance. Moreover, by teaching the addition of a cyclodextrin-fragrance compound of a fragrance-imparting product that includes resin and a product derived from the combination of cyclodextrin and a fragrance to a liquified resin, Shinbanai merely teaches the *indirect* addition of fragrance into the liquified resin, from which an article of manufacture may subsequently be formed.

Further, it is respectfully submitted that, for the same reasons provided above with respect to independent claim 1, one of ordinary skill in the art would neither have been motivated to combine the well known teachings in the bowling ball art with the teachings of Shinbanai in the manner that has been asserted in the outstanding Office Action nor have a reasonable expectation that such a combination would successfully result in the method of amended independent claim 10.

Additionally, despite the fact that the bowling ball art is a well-developed field, no art has been made of record indicating that fragrance may be added directly to a liquified material which is used in the manufacture of a bowling ball.

Accordingly, it is respectfully submitted that no *prima facie* case of obviousness has been set forth with respect to the subject matter recited in amended independent claim 10.

Each of claims 11-19 is allowable, among other reasons, as depending either directly or indirectly from claim 10, which is allowable.

Claim 11 is additionally allowable because neither the bowling ball art nor Shinbanai teaches or suggests addition of at least one fragrance directly to a polyol.

Claim 12, which depends directly from claim 11, is also allowable since the bowling ball art and Shinbanai both lack any teaching or suggestion of addition of a isocyanate to a mixture of polyol and at least one fragrance.

Claim 13 depends directly from claim 12 and is further allowable since neither the bowling ball art nor Shinbanai includes any teaching or suggestion of mixing isocyanate and a polyol which includes at least one fragrance. As known in the art, the mixture of isocyanate and polyol initiates a polymerization process which results in polyurethane.

Claim 17 is also allowable since neither the bowling ball art nor Shinbanai teaches or suggests introducing a polymerization catalyst for a liquified material from which a bowling ball is to be formed into a cavity with the liquified material and at least one fragrance.

Claim 18, which depends directly from claim 17, is additionally allowable for reciting that the liquified material which is provided and into which the at least one fragrance is directly blended comprises a polyol.

Claim 19 depends from claim 18 and is further allowable since neither the bowling ball art nor Shinbanai teaches or suggests introducing an isocyanate into a polyol into which a fragrance has been directly blended.

Independent claim 20, as amended and presented herein, recites a method for forming an article of manufacture that includes, among other things, providing a polyol, blending at least a fragrance into the polyol, substantially removing gas or gas bubbles from a mixture including the polyol and the fragrance, introducing the mixture and a polymerization catalyst therefor into a cavity of a mold, and permitting a blend that includes the polyol and the polymerization catalyst to at least partially polymerize to form the article of manufacture.

It is respectfully submitted that neither the bowling ball art, prior to the filing date of the above-referenced application, nor Shinbanai teaches or suggests a method for forming an article of manufacture which includes blending at least one fragrance directly into a polyol. Instead, as indicated at page 2 of the outstanding Office Action, before the filing date of the above-referenced application, the bowling ball art did not include the use of fragrance. Shinbanai teaches the indirect addition of fragrance to a molten thermoplastic or liquid thermoset resin by way of a cyclodextrin-carrying compound or by way of a fragrance-imparting product that includes resin which carries a product derived from the combination of cyclodextrin and a fragrance to a liquified resin.

In addition, it is respectfully submitted that, for the same reasons provided above with respect to independent claim 1, one of ordinary skill in the art would neither have been motivated to combine the well known teachings in the bowling ball art with the teachings of Shinbanai in the manner that has been asserted in the outstanding Office Action nor have a reasonable expectation that such a combination would successfully result in the method of amended independent claim 20.

Additionally, despite the fact that the bowling ball art is a well-developed field, no art has been made of record indicating that fragrance may be added directly to a liquid polyol which is to be used in forming an article of manufacture.

Claims 21-26 are each allowable, among other reasons, as depending either directly or indirectly from claim 20, which is allowable.

Claim 21 is further allowable since neither the bowling ball art nor Shinbanai teaches or suggests dissolving at least one fragrance in a polyol.

Claim 23 is additionally allowable because neither the bowling ball art nor Shinbanai teaches or suggests blending a polymerization catalyst for a polyol to a mixture that includes the polyol and at least one fragrance.

Claim 24 depends directly from claim 23 and is also allowable since neither the bowling ball art nor Shinbanai includes any teaching or suggestion of introducing an isocyanate into a cavity of a mold within which a mixture that includes the polyol and at least one fragrance is carried.

Independent claim 27, as amended and presented herein, recites an article of manufacture that includes "a substantially rigid, substantially nonporous mass comprising a two-part resin" and "fragrance within at least a portion of [the] two-art resin."

It is respectfully submitted that amended independent claim 27 is allowable for the same reasons that have been provided herein with respect to amended independent claim 1: 1) neither the bowling ball art nor Shinbanai teaches or suggests an article of manufacture that includes a two-part resin into which at least one fragrance is at least partially dissolved; 2) one of ordinary skill in the art would not have been motived to combine the teachings in the bowling ball art with those of Shinbanai to develop an article of manufacture that includes a two-part resin into which at least one fragrance is at least partially dissolved; and 3) that one of ordinary skill in the art would have no reason to expect a combination of the teachings of the bowling ball art with those of Shinbanai to successfully result in an article of manufacture formed from a two-part resin with at least one fragrance at least partially dissolved therein.

It is, therefore, respectfully submitted that, under 35 U.S.C. § 103(a), amended independent claim 27 is allowable over the combination of the well known teachings in the bowling ball art with the teachings of Shinbanai.

Claims 28 and 30 have been canceled without prejudice or disclaimer, rendering the rejections thereof moot.

Claims 29 and 31 are both allowable, among other reasons, as depending from claim 27, which is allowable.

Claim 31 is further allowable because neither the bowling ball art nor Shinbanai teaches or suggests an article of manufacture that comprises a two-part polyurethane into which at least one fragrance is at least partially dissolved.

The Bowling Ball Art in View of Sinbanai and Further in View of Anderson

Claims 9, 32, and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the bowling ball art, in view of Shinbanai, and further in view of U.S. Patent 4,762,493 to Anderson (hereinafter "Anderson").

The teachings of Shinbanai have been summarized above.

Anderson teaches scented crayons and that the scents of crayons may correspond to their colors.

Claim 9 is allowable, among other reasons, as depending from claim 1, which is allowable. Claim 9 is further allowable since Anderson does not remedy the above-noted deficiencies of the bowling ball art or Shinbanai with respect to the subject matter recited in amended independent claim 1.

Claims 32 and 33 are both allowable as respectively depending directly and indirectly from claim 27, which is allowable. Claims 32 and 33 are additionally allowable because Anderson does not remedy the above-noted deficiencies of the bowling ball art or Shinbanai with respect to the subject matter recited in amended independent claim 27.

In view of the foregoing, it is respectfully requested that the 35 U.S.C. § 103(a) rejections of claims 1, 2, 5, 7-27, 29, and 31-33 be withdrawn.

CONCLUSION

It is respectfully submitted that each of claims 1, 2, 5, 7-27, 29, and 31-33 is allowable. An early notice of the allowability of each of these claims is respectfully solicited, as is an indication that the above-referenced application has been passed for issuance. If any issues preventing the allowance of any of claims 1, 2, 5, 7-27, 29, and 31-33 remain which might be resolved by way of a telephone conference, the Office is kindly invited to contact the undersigned attorney.

Respectfully submitted,

Brick G. Power
Registration No. 38,581
Attorney for Applicant
TRASKBRITT, PC
P. O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: (801) 532-1922

Date: April 23, 2002

Enclosure: Version with Markings to Show Changes Made

BGP/djp

N:\1858\4826\Amendment.wpd

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend the claims as follows:

1. (Amended) A bowling ball, comprising:

a mass [of polymeric material] comprising a two-part resin; and

a fragrance [mixed] at least partially dissolved in at least a portion of said [polymeric material] two-part resin of said mass.

5. (Amended) The bowling ball of claim 1, wherein said [polymeric material] two-part resin comprises polyurethane.

10. (Amended) A method for manufacturing a bowling ball, comprising:

providing a liquified material;

blending at least one fragrance directly into said liquified material;

introducing said liquified material and said at least one fragrance into a cavity of a mold; and

curing said material with said at least one fragrance therein.

20. (Twice amended) A method for forming an article of manufacture, comprising:

providing a polyol;

blending at least a fragrance directly into said polyol;

substantially removing gas or gas bubbles from a mixture including said polyol and said fragrance;

introducing said mixture and a polymerization catalyst therefor into a cavity of a mold; and

permitting a blend including said polyol and said polymerization catalyst therefor to at least partially polymerize to form the article of manufacture.

23. (Previously amended) The method of claim 20, wherein said introducing includes blending said polyol and said polymerization catalyst therefor.

27. (Amended) An article of manufacture, comprising:

a substantially rigid, substantially nonporous mass [of polymeric material] comprising a two-part resin; and

fragrance at least partially dissolved within at least a portion of said [mass] two-part resin.

29. (Amended) The article of claim 27, wherein at least a portion of said fragrance is dispersed throughout said [polymeric material] two-part resin of at least a portion of said mass.

31. (Amended) The article of claim 27, wherein said [polymeric material] two-part resin comprises a two-part polyurethane.